



Infosafe No™	3CH8R	Issue Date : January 2017	RE-ISSUED by CHEMSUPP
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Product Name : **VITAMIN B2**

Not classified as hazardous

1. Identification

GHS Product Identifier VITAMIN B2

Company Name CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)

Address 38 - 50 Bedford Street GILLMAN
SA 5013 Australia

Telephone/Fax Number Tel: (08) 8440-2000
Fax: (08) 8440-2001

Recommended use of the chemical and restrictions on use Food additive, Ingredient for pharmaceutical products.

Other Names	Name	Product Code
	VITAMIN B2	VP008

Other Information	7,8-dimethyl-10-(D-ribo-2,3,4,5-tetrahydroxypentyl) isoalloxazine Riboflavin EMERGENCY CONTACT NUMBER: +61 08 8440 2000 Business hours: 8:30am to 5:00pm, Monday to Friday.
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Chem-Supply Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Chem-Supply Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Chem-Supply Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

2. Hazard Identification

GHS classification of the substance/mixture Not classified as hazardous according to the Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(2004) 3rd Edition, Safe Work Australia].
Not classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).

3. Composition/information on ingredients

Chemical Characterization	Ingredients				
	Name	CAS	Proportion	Hazard Symbol	Risk Phrase
Solid	Riboflavin	83-88-5	98-100 %		

4. First-aid measures

Inhalation Move to fresh air in case of accidental inhalation of dust or fumes from over heating or combustion. If symptoms persist, seek medical attention.

Ingestion Clean mouth with water and drink afterwards plenty of water. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person.

Skin Take of contaminated clothing and shoes immediately. Wash off with soap and plenty of water.

Eye contact Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing.

First Aid Facilities Maintain eyewash fountain and safety shower in work area.

Advice to Doctor Treat symptomatically.

Other Information For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor.

5. Fire-fighting measures

Suitable extinguishing media Suitable extinguishing media - foam and water.



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Specific hazards arising from the chemical	Consider dust explosion hazard.
Decomposition Temp.	280 °C (melting point)
Precautions in connection with Fire	In the event of fire, wear self-contained breathing apparatus.
Other Information	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. Accidental release measures

Spills & Disposal	Sweep up and shovel.
Personal Protection	Wear protective clothing specified for normal operations (see Section 8)

7. Handling and storage

Precautions for Safe Handling	Avoid generation or accumulation of dusts. Use in well ventilated areas away from all ignition sources. Take precautionary measures against static discharges.
Conditions for safe storage, including any incompatibilities	Keep container tightly closed and in a cool, well-ventilated place. Keep away from direct sunlight
Storage Temperatures	Store at room temperature (15 to 25 °C recommended).
Other Information	No decomposition if stored and applied as directed.

8. Exposure controls/personal protection

Other Exposure Information	A time weighted average (TWA) concentration for an 8 hour day, and 5 day week has not been established by Safe Work Australia for this product. There is a blanket limit of 10 mg/m ³ for dusts when limits have not otherwise been established.
Appropriate engineering controls	In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.
Respiratory Protection	Where ventilation is not adequate, respiratory protection may be required. Avoid breathing vapours or mists. Select and use respirators in accordance with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. When mists or vapours exceed the exposure standards then the use of the following is recommended: Approved respirator with organic vapour and dust/mist filters. Filter capacity and respirator type depends on exposure levels.
Eye Protection	The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.
Hand Protection	Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance.
Body Protection	Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.
Hygiene Measures	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

9. Physical and chemical properties

Form	Solid
Appearance	Yellow to yellow-orange free flowing powder.
Odour	Odourless.
Decomposition Temperature	280 °C (melting point)
Solubility in Water	0.16 g/l (@ 37 °C); 0,085 g/l (@ 25 °C)
Solubility in Organic Solvents	Soluble in the following solvents: Hydrochloric acid 0.1 N: 0.18 g/l (37 °C); Ethanol: 0.045 g/l (27.5 °C) Insoluble in Ether and Acetone.
pH	pH 6 (saturated aqueous solution)



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Vapour Pressure < 0,001 hPa (at 25 °C; calculated)

Partition Coefficient: Log P(o/w): -1.46

n-octanol/water

Density ca 380 kg/cm³ (bulk density)

Flammability Non combustible material.

Molecular Weight 376.37 g/mol

Other Information Combustability index for deposited dust:
3 (23 °C); : 3 (100 °C).
Dust explosion class:
St(H)1 (Milled sample, Median value of the tested sample 0,032 mm, Loss on drying 1,5 %; The value was determined in the modified Hartmann tube.).
Minimum ignition energy:
>= 450 °C (Median value of the tested sample 0,082 mm) determined in the BAM oven
>= 430 °C (Median value of the tested sample 0,096 mm) determined in the BAM oven.
Powder volume resistivity :
ca. 1E+13 Ohmm (, Median value of the tested sample 0,082 mm, Loss on drying 1,5 %) The material can accumulate static charge and can therefore cause electrical ignition.
Minimum ignition energy :
10 - 30 mJ (Milled sample, Median value of the tested sample 0,032 mm, Loss on drying 1,5 %, EN 13821)
The Minimum ignition energy (MIE) of a dust/air mix depends on the particle size the water content and the temperature of the dust. The finer and the dryer the dust the lower the MIE.
General remark: The indicated dust explosion characteristics are only valid for this product and are sensitive to the sample's parameters.
Dissociation constant: pKa 10.2

10. Stability and reactivity

Chemical Stability Hygroscopic Stable under normal use conditons.

Conditions to Avoid Heat, direct sunlight, open flames or other sources of ignition. Moisture.

Incompatible Materials Strong acids, strong bases and strong oxidising agents.

Hazardous Decomposition Products Nitrogen oxides.

Possibility of hazardous reactions Dust may form explosive mixture in air.

Hazardous Polymerization Will not occur.

Other Information Thermal decomposition: Decomposes on heating. Potential for exothermic hazard.
Dust may form explosive mixture in air.

11. Toxicological Information

Acute Toxicity - Oral LD50 (mouse): > 2 000 mg/kg
LD50 (rat): > 2 000 mg/kg; Repeated dose toxicity : NOAEL (Oral, rat) : 200 mg/kg/day Sub-chronic toxicity study (90-day).

Acute Toxicity - Dermal LD50 (rabbit): > 5 000 mg/kg

Acute Toxicity - Inhalation LC50 (rat, 4 h): > 5,4 mg/l

Ingestion May cause irritation.

Inhalation May cause irritation.

Skin Prolonged skin contact may cause skin irritation.

Eye Dust contact with the eyes can lead to mechanical irritation.

Skin Sensitisation Positive photoallergenic skin reaction (guinea pig)

Carcinogenicity No evidence of carcinogenic properties.



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Serious eye damage/irritation	No eye irritation (rabbit).
Mutagenicity	No evidence of mutagenic properties.
Skin corrosion/irritation	No skin irritation (rabbit).
Human Effects	Therapeutic dosage: 5 - 100 mg/day. Recommended Daily Allowance: 1.6 mg

12. Ecological information

Persistence and degradability	Readily biodegradable. 100%/28d
Environmental Fate	No information available.
Bioaccumulative Potential	log P(o/w): -1.46
Acute Toxicity - Fish	LC50 [Oncorhynchus mykiss (rainbow trout)]: > 500 mg/l/96h
Acute Toxicity - Daphnia	EC50 [Daphnia magna (Water flea)]: 47.4 mg/l/48h EC0 [Daphnia magna (Water flea)]: 43.8 mg/l/48h
Acute Toxicity - Algae	EbC50 [Desmodesmus subspicatus (green algae)]: 9.8 mg/l/72h ErC50 [Desmodesmus subspicatus (green algae)]: 21 mg/l/72h
Acute Toxicity - Bacteria	IC0 (activated sludge): > 100 mg/l/28d. No inhibition was observed under the biodegradation test conditions.

13. Disposal considerations

Disposal Considerations	Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.
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14. Transport information

Transport Information	Not classified as a Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.
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15. Regulatory information

Poisons Schedule	Not Scheduled
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16. Other Information

Literature References	'Standard for the Uniform Scheduling of Medicines and Poisons No. 15', Commonwealth of Australia, November 2016. Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997. National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007. Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', 2011. Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010. Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'. Safe Work Australia, 'Hazardous Substances Information System, 2005'. Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances (2011)'. Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995) 3rd Edition]'.
Contact Person/Point	Paul McCarthy Ph. (08) 8440 2000 DISCLAIMER STATEMENT: All information provided in this data sheet or by our technical representatives is compiled from the best knowledge available to us. However, since data, safety standards and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, we make no warranty either expressed or implied, with respect to the completeness or accuracy to the information contained herein. Chem-Supply accepts no responsibility whatsoever for its accuracy or for any results that may be obtained by customers from using the data and disclaims all liability for reliance on information provided in this data sheet or by our technical representatives.

Empirical Formula & Structural Formula	C17H20N4O6
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Safety Data Sheet

infosafe
CS: 1.7.2

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